Does improved access to data change the quality of patient assessments and care plans: A single case research design study

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Future patient records must be more than a way to store patient data-- they must also support the clinical decisions process and help to improve the quality of patient care.[1] This poster demonstrates use of a single case design model to study how access to patient data and disease/treatment information affects the quality of patient assessments and care plans written by clinical nurses.

Review of the literature: As Corcoran-Perry and Graves documented "little research has been done to describe the actual information needs ... of nurses".[2] Most studies concerning information needs have focused on libraries or printed materials. A bibliographical list of the pertinent research is included on the poster.

Setting: The study described on this poster was conducted at a large academic medical center, on a 30 bed medical oncology unit with an all RN staff. Patients on the unit experience repeated admissions for chemotherapy/biotherapy. These patients are discharged to the ambulatory setting and continue to receive treatment from this institution. In early 1993 the model of patient care delivery converted to primary nursing with patient care managers. With the introduction of this model improved access and utilization of patient data became a priority of the nurses on the unit. Overlapping this change was the introduction of an electronic patient record(EPR). This record provided easy access to medical data from all previous inpatient and outpatient events. The EPR contains dictated textural data (ie history and physical exams, out patient visits) numerical data (ie lab) as well as data from ancillary departments (ie radiology). The poster contains a diagram of the care delivery model and a list of all data types in the EPR.

Research question: Does improved access to patient data via an EPR and printed information about the disease/treatment prior to the patient admission change the:

> amount of time needed to collect assessment data
> quality of data collection during the assessment process
> quality of the written care plan utilized throughout the admission

Method: This study was done using a single-subject methodology. This "method involves the application of time-series experimental designs using subjects as their own control"[3]. Baseline conditions are measured. The subject is exposed to an intervention. After this exposure those measures taken at baseline are repeated. In order to identify the effect of the intervention pre and post data are compared. In this study the clinical unit was the subject. Pre implementation clinical nurses had access to the patient's paper medical record from previous admissions. Post implementation the nurses were also given access to electronic patient data from all previous events as well as PDQ materials concerning the disease/treatment. A random sample of written assessments and care plans from pre and post implementation were evaluated by nurses from the Quality Improvement Department using the institution's QI indicators. In order to ensure blind review dates and names were deleted from the documents. The poster includes samples of pre and post documents as well as the written feedback from the evaluators. All data that identifies specific patients and nurses have been deleted. A chart presenting pre and post results is included on the poster.

Reference

[1] Dick, R. & Steen, E. Computer based patient record. Washington, DC:National Academy Press. 1991, p. 136.

[2] Corcoran-Perry S. & Graves, J., *Supplemental-information - seeking behavior of cardiovascular nurses*, Research in Nursing and Health. 13, 1990, pp-119-127.

[3] Kazdin, A., Single-case research design. New York: Oxford University Press. 1982.

0195-4210/92/$5.00